NILS

March 2000

wo_nils@blm.gov
http://www.blm.gov/nils

The National Integrated Land System

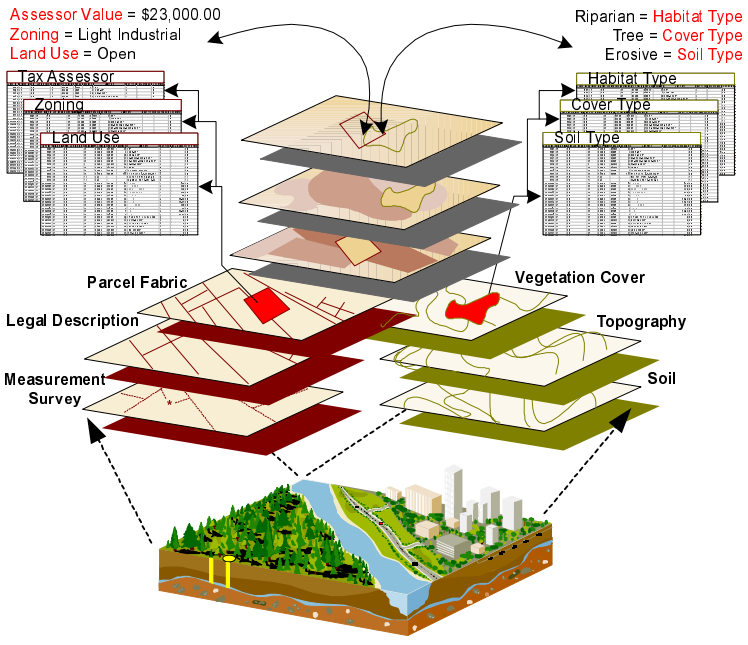
The National Integrated Land System (NILS) is a joint project between the Bureau of Land Management (BLM) and the USDA Forest Service (USFS). NILS will provide a business solution to land managers who face an increasingly complex environment of complicated transactions, legal challenges, and deteriorating and difficult-to-access records.

The BLM and USFS are working in partnership with states, counties, and private industry to develop a common data model and software tools for the collection, management, and sharing of survey data, cadastral data, and land records information. Using geographic information system (GIS) technology, NILS will greatly facilitate cooperative land management and better decision-making among all land managers.

The vision for NILS is to provide a solution that unifies the worlds of surveying and GIS. Implementing this vision will require a common data model, in-field computing tools, a measurement management engine to analyze survey data, and parcel creation and maintenance tools. This integration of surveying and GIS will provide land managers with a complete field-to-fabric technology solution.

To be successful, NILS must meet a diverse set of requirements. It must work in PLSS as well as metes and bounds states. It must work in both urban and rural environments. It must support survey control, yet allow databases to be created based on map control when more precise survey data are not available. It needs to support digitized data, scanned data, GPS data, legal descriptions, orthophotography, documents, and others. Users must be able to customize NILS to accommodate their established workflow and business practices.

Commercial off-the-shelf (COTS) GIS technology will form the foundation of NILS. Based on industry standards, including the Common Object Model (COM) and object-oriented (OO) technology, the software will provide a modern development platform for NILS. Object-oriented software engineering techniques will be used to extend the COTS to meet the specific needs of NILS users.



Field-To-Fabric

NILS

wo_nils@blm.gov
http://www.blm.gov/nils

The NILS project has four major components:

Survey Management: An integrated set of automation objects that will be embedded into compatible survey data collection software packages. This will support the capture of measurement features and metadata directly into a GIS database format. The goal is to minimize the need for data conversion and re-construction as measured features are incorporated into the land records management system.

Measurement Management: Will allow users to produce a new feature coordinate solution by performing a weighted planimetric-geodetic adjustment according to the qualitative characteristics of individual feature elements in the working set. This will enable users to create a higher-quality control network database for both PLSS and metes and bounds land environments.

Parcel Management: Will provide a process for managing land records and cadastral feature data stored in the database model. It will provide custom feature classes, tools, and procedures for editing land records in a transactional, history-tracking environment. Support will be provided to allow users to construct and edit legal description fabrics and to create required parcel fabrics from them. Parcel fabrics may include ownership, land use rights, tax assessment, and others.

GeoCommunicator: A proactive Internet subscription (no fee) Web site for sharing information about data and activities of interest to land managers. Map navigation and content filters will allow users to discover information that meets their needs - such as available parcel data, planned surveys, and potential cost-sharing partners. The goal of the GeoCommunicator is to facilitate data sharing and collaborative efforts among land managers.

NILS will be designed, developed, and released using an incremental implementation lifecycle methodology. Functionality will be prioritized and delivered to users in successive stages, rather than waiting until the entire system is developed. Current plans include: FY2000/2001 - GeoCommunicator; FY2001/2002 - Survey Management and Measurement Management; FY2002/2003 - Parcel Management. Within these timeframes prototypes will be developed, and incremental releases of partial functionality may be available.

For more detailed information, visit the NILS project Web site at **http://www.blm.gov/nils**

Contact the NILS project by e-mail: **wo_nils@blm.gov** or contact the BLM by phone: **(303) 236-0815**

On January 7, 1998 the BLM and USFS signed a memorandum entitled "Bureau of Land Management-Forest Service Partnership for Land Management and Customer Services." This became known as the "Service First" initiative. Subsequently, sponsors from the BLM and USFS signed a Partnership Agreement for an ALP/ ALMRS Joint Development Project on June 11, 1998. Additionally, a Project Charter was signed in March, 1999 by the project sponsors, and with approval of the charter, the project was renamed the National Integrated Land System.